UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/679,714	10/06/2003	Aziz Chafic Awad	Healthtreat 4.1-1	2884

21036 7590 12/01/2006

MCLEOD & MOYNE, P.C.
2190 COMMONS PARKWAY
OKEMOS, MI 48864

EXAMINER	
THAKUR, VIREN A	
ART UNIT	PAPER NUMBER
1761	

DATE MAILED: 12/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/679,714	AWAD, AZIZ CHAFIC	
	Examiner	Art Unit	
	Viren Thakur	1761	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *11 September 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8 and 10-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8 and 10-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. As a result of the amendment to the claims Applicant's arguments with respect to claims 1-8 and 10-19 have been considered but are moot in view of the new ground(s) of rejection.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: paragraph 0021 and paragraph 0032 disclose "a steam inlet 16" and "a steam inlet 36"; however, the drawing indicate that items 16 and 36 are outlets. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required

corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Examiner's Note

3. Regarding claim 1, the Applicant has support for recirculating the aqueous medium within the fermenter through the outlet that contains a strainer. Step c of claim 1 recites removing the aqueous medium from the uncooked processed food in the fermenter through the strainer. Since Applicant does not have support for removing the aqueous medium from the fermenter, step c of claim 1 is interpreted to only read on the recirculation of the aqueous medium within the fermenter system, and cannot read on removing the aqueous medium from the fermenter system through the strainer.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-8 and 10-19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to

reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 1 recites the additional step of removing the process food from the fermenter. The examiner was not able to find sufficient support within the disclosure of the invention for removing the processed food from the fermenter. Although the succeeding step indicates that the uncooked processed food is cooked, without proper disclosure the limitation reads that the uncooked processed food can be cooked within the fermenter.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-8 and 10-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claim 1 recites the limitation "the uncooked processed food aid". There is insufficient antecedent basis for this limitation in the claim.

b. Claim 14 indicates that "prior to or during the fermentation the pH of the aqueous medium is adjusted during the fermentation." The language "prior to or during" conflicts with the rest of the limitation which states that the pH of the aqueous medium is adjusted **during** the fermentation. It is

unclear as to whether the pH is adjusted prior to or during the fermentation process.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claims 1-5, 7-12, 14-16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lynn (US 5221617) in view of Levy (US 4568643). Lynn teaches as cited in the prior Office Action mailed June 14, 2006. Additionally, Lynn teaches an object of the invention is to provide a compact and economical system (Column 4, Lines 37-65). However, Lynn is silent in teaching an outlet

with a strainer, and removing the aqueous medium from the uncooked processed food in the fermenter through the strainer.

Levy teaches fermenting potato (Column 2, Line 63 to Column 3, Line 12; Column 4, Lines 17-25) by a microorganism (Column 4, Lines 31-39) in a recycling closed system so as to "provide a reactor system which will provide for the continuous recycle of the solvent system and fermentation liquor" (Figure 1; Column 2, Lines 15-31; Column 11, Lines 10-15). Levy further teaches a porous wall (Column 3, Lines 53-57) that would prevent the product to be fermented, such as a potato, from exiting through the outlet. Levy additionally discloses filters for the fermenting cultures (Column 4, Lines 40-46); thus teaching removing the aqueous medium from the product to be fermented. Additionally, Levy teaches as an object of the invention "to provide a reactor structure which will allow the removal of fermentation products from the fermentation liquor during continuous processing so that the culture medium will not be inactivated, and can thus be reused (Column 2, Lines 15-28). Containment of the product within the fermenter ensures that the continuous recirculation of the fermentation liquor will be able to act on the contained substrate, thus further enhancing the fermentation of said substrate. Therefore, it would have been further obvious to prevent recirculation of the fermenting substrate (potato) since such particulate matter is known to one having ordinary skill in the art to back up the pumps that enable recirculation of the fermentation liquor. Thus, based on the teachings of

Levy, providing a barrier so as to prevent the removal of the product to be fermented would not have provided a patentable feature over the prior art.

Regarding providing recirculation and a straining medium, Christ et al. (US 4293655; Figure 1; Column 7, Line 51 to Column 8, Line 5) are cited as further evidence that it was known in the art to provide a fermentation process comprising recirculation of a fermentation and a sieves (Figure 1, Item 11) to filter the exiting medium. Staron (US 4238567) provide further evidence that it was known in the art to provide recirculation of a fermentation liquor for the purpose of providing a moist and consistent fermentation process and product (Column 1, Lines 22-62); thus such limitations would not have provided an inventive step over the prior art.

Regarding removing the processed food from the fermenter, Lynn discloses as cited in the prior Office Action mailed June 14, 2006. Additionally, Lynn discloses wherein the precursor base contains flour (Column 3, Lines 1-20), which is ground grain – which is therefore a processed food. The precursor base is then agitated with water and yeast, the slurry of which is fermented, which is then removed from the fermenting process and used in preparing bakery dough (Column 4, Lines 16-36; Column 8, Lines 31-51).

Regarding applicant's amendments the Examiner notes that the aqueous medium *for a fermentation* by a microorganism for food fermentations is a recitation of the intended use of the claimed invention and must result in a structural difference between the claimed invention and the prior art in order to

patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. The amended language *for the fermentation* is also intended use language which the prior art is capable of performing. The Examiner further notes that although the process might be different, if the prior art meets the steps of the instant method claims, then the prior art is capable of performing the intended use of the method.

Additionally, the fact that applicant may have recognized or "discovered" another advantage which would flow naturally from following the teachings of the prior art cannot be the basis for patentability when the stated differences would otherwise be inherently present in the prior art product. In the instant case, simply because the reference did not address each and every possible property of the resultant baked product, including acrylamide levels, does not change the fact that the disclosed starting materials and methods are the same as those instantly claimed, and thus the referenced product would also necessarily possess the claimed properties. Applicant has performed or provided no distinct step such that the property of "reduced acrylamide production" would unexpectedly occur in the claimed invention, but not in the reference.

11. Claims 1-6, 8, 10, 13, 15 and 17-19, are rejected under 35 U.S.C. 103(a) as being unpatentable over Hilton et al. (US 4140801) in view of Levy (US 4568643). Hilton et al. teach as cited in the prior Office Action, mailed June 14,

2006. Hilton et al. further teach subdividing the potato pieces to a sufficient extent so as to effectively mix the yeast with the solids, so as to progress fermentation at a "satisfactory rate" (Column 2, Lines 37-47). Hilton et al. are silent in teaching a strainer for the uncooked processed food and means for recirculation of the aqueous medium in the fermenter.

As applied above, Levy teaches a means for straining and recirculation of the aqueous medium in the fermenter. Additionally, Levy teaches as an object of the invention "to provide a reactor structure which will allow the removal of fermentation products from the fermentation liquor during continuous processing so that the culture medium will not be inactivated, and can thus be reused (Column 2, Lines 15-28). Furthermore, Levy states that the recycle of the solvent system and fermentation liquor will allow for a continuous system that will only require small make-up amounts of water and solvent. Providing a porous wall that contains the fermentation substrate (such as a potato) allows for such a continuous operation since the substrate will be stationary within the reactor while the solvent and fermentation liquor will be continuously circulating through the reactor.

Since Hilton et al. teach requiring a satisfactory fermentation yield rate and given the teachings of Levy, it would have been obvious to provide a recirculation means for the fermentation medium and a straining means for containing the food product, since a continuous process would streamline the fermentation process of Hilton et al., and allow the culture to reuse the nutrients in the

fermentation liquor. Therefore, it would have been further obvious to prevent recirculation of the fermenting substrate (potato) since such particulate matter is known to one having ordinary skill in the art to back up the pumps that enable recirculation of the fermentation liquor. Additionally, such a process as taught by Levy would increase the throughput of fermented product. It is well known to one having ordinary skill in the art that continuous processing increase the output of product, and requires for the automation of other steps in the process, such as the separation of the yeast. As evidenced by Levy, providing filters and porous walls provides the separation required in such a continuous process.

Regarding providing recirculation and a straining medium, Christ et al. (US 4293655; Figure 1; Column 7, Line 51 to Column 8, Line 5) are cited as further evidence that it was known in the art to provide a fermentation process comprising recirculation of a fermentation and a sieves (Figure 1, Item 11) to filter the exiting medium. Staron (US 4238567) provide further evidence that it was known in the art to provide recirculation of a fermentation liquor for the purpose of providing a moist and consistent fermentation process and product (Column 1, Lines 22-62); thus such limitations would not have provided an inventive step over the prior art.

Regarding new instant claim 19, Hilton et al. teach sliced potatoes (Column 2, Lines 37-41).

Regarding applicant's amendments the Examiner notes that the aqueous medium *for a fermentation* by a microorganism for food fermentations is a

recitation of the intended use of the claimed invention and must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. The amended language *for the fermentation* is also intended use language which the prior art is capable of performing. The Examiner further notes that if the prior art meets the steps of the instant method claims, then the prior art is capable of performing the intended use of the method.

Additionally, the fact that applicant may have recognized or "discovered" another advantage which would flow naturally from following the teachings of the prior art cannot be the basis for patentability when the stated differences would otherwise be inherently present in the prior art product. In the instant case, simply because the reference did not address each and every possible property of the resultant baked product, including acrylamide levels, does not change the fact that the disclosed starting materials and methods are the same as those instantly claimed, and thus the referenced product would also necessarily possess the claimed properties. In fact, Hilton et al. noted that the fermentation resulted in a reduction of reducing sugars which were known to lead to increased browning upon cooking, such as frying. Applicant has performed or provided no distinct step such that the property of "reduced acrylamide production" would unexpectedly occur in the claimed invention, but not in the reference.

12. Claims 1-5, 7-8, 11-12, 14 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hollenbeck (US 3615697) in view of Levy (US 4568643). Hollenbeck teaches as cited in the prior Office Action, mailed June 14, 2006. Hollenbeck further teaches the need for a resulting malt flavored food additive that is subjected to appropriate conditions to effect and promote the fermentation to yield a fermentation product rich in lactic acid (Column 1, Lines 39-51). Hollenbeck is silent in teaching a strainer for the uncooked processed food and means for recirculation of the aqueous medium in the fermenter.

Levy teaches as applied above.

Since Hollenbeck discloses a need for a food additive having rich fermentation properties and given the teachings of Levy, it would have been obvious to provide providing a recirculation means for the fermentation medium and a straining means for containing the food product, since a continuous process would streamline the process of producing the food additive of Hollenbeck. The process as taught by Levy would increase the yield of the fermentation product; thus it is well known to one having ordinary skill in the art that continuous processing increases the output of product, increases the fermentation rate and requires for the automation of other steps in the process, such as the separation of the yeast. As evidenced by Levy, providing filters and porous walls provides the separation required in a continuous process. Thus it would have been obvious to prevent recirculation of the fermenting substrate

(potato) since such particulate matter is known to back up the pumps that enable recirculation of the fermentation liquor.

Regarding providing recirculation and a straining medium, Christ et al. (US 4293655; Figure 1; Column 7, Line 51 to Column 8, Line 5) are cited as further evidence that it was known in the art to provide a fermentation process comprising recirculation of a fermentation and a sieves (Figure 1, Item 11) to filter the exiting medium. Staron (US 4238567) provide further evidence that it was known in the art to provide recirculation of a fermentation liquor for the purpose of providing a moist and consistent fermentation process and product (Column 1, Lines 22-62); thus such limitations would not have provided an inventive step over the prior art.

Regarding applicant's amendments the Examiner notes that the aqueous medium *for a fermentation* by a microorganism for food fermentations is a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. The amended language *for the fermentation* is also intended use language which the prior art is capable of performing. The Examiner further notes that if the prior art meets the steps of the instant method claims, then the prior art is capable of performing the intended use of the method.

Additionally, the fact that applicant may have recognized or "discovered" another advantage which would flow naturally from following the teachings of the prior art cannot be the basis for patentability when the stated differences would otherwise be inherently present in the prior art product. In the instant case, simply because the reference did not address each and every possible property of the resultant baked product, including acrylamide levels, does not change the fact that the disclosed starting materials and methods are the same as those instantly claimed, and thus the referenced product would also necessarily possess the claimed properties. Applicant has performed or provided no distinct step such that the property of "reduced acrylamide production" would unexpectedly occur in the claimed invention, but not in the reference.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 4238567 discloses a recirculation of an aqueous medium including sieves at the outlet of the reactor for allowing only the recirculation of the aqueous medium. US 4293655 disclose a fermentation process that recirculates the aqueous medium. US 3891772 discloses recycle of the solvent medium into a fermentation process and a filtration of the aqueous medium in the reactor vessel. US 4328317 discloses fermentation an a

recirculating agitated reactor vessel. US 4684614 discloses recirculation of the fermentation medium and filtration of the fermentation medium.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Viren Thakur whose telephone number is (571)-272-6694. The examiner can normally be reached on Monday through Friday from 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on (571)272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Viren Thakur
Examiner
Art Unit: 1761

KEITH HENDRICKS
PRIMARY EXAMINER